| F H W A REGION NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 3 | MD | | 2 | 2 |

## PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with interconnect at the intersection of MD 97 and MD 28 in Montgomery County. The modification is necessary due to the addition of a southbound right turn lane on MD 97. The existing interconnect cable shall be maintained. MD 97 is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

1.) The intersection is to continue operating in a NEMA six-phase, semi-actuated mode, with the MD 97 approaches running concurrently. Exclusive left turn phases shall remain for both approaches of MD 97. The MD 28 approaches shall operate as a split phase.

2.) The existing base-mounted cabinet shall be maintained at this intersection.

III. SPECIAL NOTES

1.) The Contractor is to route all proposed signal cables to the base of the cabinet and tag. MCDOT Forces shall be responsible for the internal wiring of the cable. Contact Mr. Emil Wolanin at (301) 217-2208 seventy-two (72) hours in advance of the intended work.

2.) Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. Due to the extensive interconnect relocation work required, all interconnect work shall be performed at night under MCDOT supervision. Contact Mr. Emil Wolanin at (301) 217-2208 seventy-two (72) hours in advance of the intended work.

## EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

| QUANTITY | SPEC. SECTION | DESCRIPTION |
|---|---|---|
| 4 EA | 814 | 12", one-way, three-section (R,Y,G) polycarbonate traffic signal head having proper span wire hangers, balance adjusters and tunnel visors. |
| 4 EA | 814 | 12", one-way, three-section (RA,YA,GA) polycarbonate traffic signal head having proper span wire hangers, balance adjusters and tunnel visors. |
| 1 EA | 814 | 12", one-way, four-section (R,Y,G,GA) polycarbonate traffic signal head having proper span wire hangers, balance adjusters and tunnel visors. |

## EQUIPMENT LISTS (CON'T.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

| QUANTITY | SPEC. SECTION | DESCRIPTION |
|---|---|---|
| LS | 106 | Mobilization. |
| LS | 106 | Maintenance of traffic. |
| 300 SF | 104 | Temporary traffic sign. |
| 10 UD | 105 | Flashing arrow panels. |
| 1 CY | 204 | Test pit excavation. |
| 35 LF | SP-555 | Furnish and install preformed pavement marking tape, white (24" width for stoplines). |
| 180 SF | 610 | Furnish and install 4" concrete sidewalk, mix No. 2. |
| 180 SF | 805 | Remove sidewalk. |
| 3 CY | 801 | Furnish and install concrete foundation. |
| 1 EA | 818 | Furnish and install grout. |
| 1 EA | 804 | Furnish and install ground rod, 3/4" diameter x 10' length. |
| 1 EA | 818 | Furnish and install 12" x 30' steel strain pole. (Note: 4 anchor bolts will be 1 3/4" x 90".) |
| 8 EA | 814 | Install 12", one-way, three-section traffic signal head, span wire mount. |
| 1 EA | 814 | Install 12", one-way, four-section traffic signal head, span wire mount. |
| 1 EA | 805 | Furnish and install 3", 90 degree polyvinyl chloride (Schedule 40) bend. (To be installed into existing concrete base.) |
| 1 EA | 870 | Furnish and install 3" weatherhead. |

## EQUIPMENT LISTS (CON'T.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR (CON'T.)

| QUANTITY | SPEC. SECTION | DESCRIPTION |
|---|---|---|
| 320 LF | 819 | Furnish and install 3/8" steel span wire. |
| 135 LF | 819 | Furnish and install 1/4" steel tether wire. |
| 10 LF | 805 | Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched). |
| 35 LF | 805 | Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (bored). |
| 10 LF | 805 | Furnish and install 2" polyvinyl chloride electrical conduit (Schedule 40) (trenched). |
| 10 LF | 805 | Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 40) (trenched). |
| 1 EA | 811 | Furnish and install handhole (frame and cover). |
| 100 LF | 804 | Furnish and install stranded bare copper ground wire (No. 6 A.W.G.). |
| 375 LF | 810 | Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) (aluminum shielded). |
| 1335 LF | 810 | Furnish and install 5-conductor electrical cable (No. 14 A.W.G.). |
| 2 EA | | Furnish and install down guy. |
| 2 EA | | Remove steel span wire and all associated wiring. |
| 1 EA | | Remove steel strain pole. |
| 9 EA | | Remove traffic signal head. |
| 1 EA | | Remove handhole and fill with concrete. |
| 5 EA | | Relocate sign. |
| 375 LF | | Pull back and reroute existing interconnect cable. |
| 1 EA | | Use existing plan on disk and as-built traffic control device. |

## MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS

The following Traffic Control Standard Numbers shall be referenced for the project.

Standard 105.00 Standard 105.01
Standard 105.02 Standard 105.03

Standard 105.102 Standard 105.104
Standard 105.106 Standard 105.108
Standard 105.110

Standard 105.202 Standard 105.204
Standard 105.206 Standard 105.208
Standard 105.210 Standard 105.212
Standard 105.214

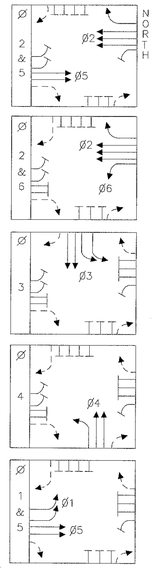
## SEQUENCE OF OPERATION SHEET

| SIGNAL NO. | SIGNAL HEAD INDICATIONS | | | | | |
|---|---|---|---|---|---|---|
| | 1,2,5,6,9, 11,12 | 15,16 | | | 3,4,7,8,10, 13,14,17 | |
| TOTAL: | 7 | 2 | | | 8 | |
| LEGEND: O OPTICALLY LIMITED; R RED; Y YELLOW; G GREEN; ◄ ARROW; F FLASHING | ◄R ◄Y ◄G | R Y G ◄G | R ◄Y ◄G | R Y G | R Y G | 9" or 12" |
| | 12" | 12" | 12" | 8" | 12" | |

| SIGNAL NO. | SEQUENCE OF OPERATION INTERVAL | | | | | | | | | | | | FLASH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| 1 | ◄R | ◄R | ◄R | ◄G | Y | R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R |
| 2 | ◄R | ◄R | ◄R | G | Y | R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R |
| 3 | G | G | G | G | Y | R | R | R | R | R | R | R | Y |
| 4 | G | G | G | G | Y | R | R | R | R | R | R | R | Y |
| 5 | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄Y | ◄R | ◄R |
| 6 | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄Y | ◄R | ◄R |
| 7 | G | Y | R | R | R | R | R | R | R | R | G | Y | R | Y |
| 8 | G | Y | R | R | R | R | R | R | R | R | G | Y | R | Y |
| 9 | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | G | ◄Y | ◄R | ◄R | ◄R |
| 10 | R | R | R | R | R | R | R | R | R | G | ◄Y | R | R | R |
| 11 | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | G | ◄Y | ◄R | ◄R | ◄R |
| 12 | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | ◄R | G | ◄Y | ◄R | ◄R | ◄R |
| 13 | R | R | R | R | R | R | R | R | G | Y | R | R | R | R |
| 14 | R | R | R | R | R | R | R | R | G | Y | R | R | R | R |
| 15 | R | R | R | R | R | ◄G | Y | R | R | R | R | R | R | R |
| 16 | R | R | R | R | R | ◄G | Y | R | R | R | R | R | R | R |
| 17 | R | R | R | R | R | G | Y | R | R | R | R | R | R | R |
| PHASE | 2 & 5 | | ALL RED | 2 & 6 | | ALL RED | 3 | | ALL RED | 4 | | ALL RED | 1 & 5 | ALL RED |

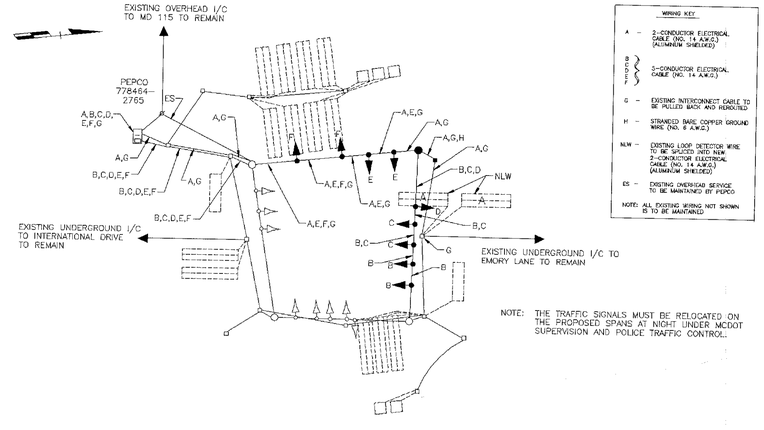
NOTES:

PHASING




3004PHA

SUBMITTED: R.R.ZACHERL CHECKED: APPROVED:
IN SERVICE BY: DATE: TIME:




NOTE: THE TRAFFIC SIGNALS MUST BE RELOCATED ON THE PROPOSED SPANS AT NIGHT UNDER MCDOT SUPERVISION AND POLICE TRAFFIC CONTROL.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3004A


| REVISIONS | APPROVALS |
|---|---|
| | ASSISTANT DIVISION CHIEF TEDD |
| | ASST. DISTRICT ENGINEER, TRAFFIC |
| | CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION |
| | DIRECTOR, OFFICE OF TRAFFIC AND SAFETY |

MDOT – STATE HIGHWAY ADMINISTRATION
*Office of Traffic and Safety*
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION

DRAWN BY: THACKER
DES. BY: R. ZACHERL
CHK. BY:

MD 97 AND MD 28
COUNTY MONTGOMERY

DATE: JULY 25, 1996 F.A.P. NO.
SCALE: N/A S.H.A. NO. BW911M81

TS/STD. NO. 190 B

SHEET NO. 2 OF 2